

REMARKS

Claims 1, 2, 5, 8, 9, 17-19, and 22-33 are all the claims pending in the application. By this Amendment, Applicant amends the title to cure a minor informality, claims 1 and 23 to further clarify the invention and claim 5 to cure a minor informality. In addition, Applicant adds claim 34, which is clearly supported throughout the specification *e.g.*, by original claim 4. No new matter is being added.

I. Preliminary Matters

Applicant thanks the Examiner for acknowledging Applicant's claim to foreign priority and for indicating receipt of the certified copies of the Priority Documents. Applicant also thanks the Examiner for returning the initialed Form PTO/SB/08 submitted with the Information Disclosure Statement filed on November 19, 2007.

Applicant respectfully requests that the Examiner indicate acceptance of the drawing figures filed on January 9, 2006.

I. Summary of the Office Action

The Examiner withdrew the previous grounds of rejections. The Examiner, however, found new grounds for rejecting the claims. Specifically, the Examiner objected to claim 5 and the specification for minor informalities. The Examiner rejected claims 1, 2, 5, 8, 9, 17-19, and 22-33 under 35 U.S.C. § 103(a).

II. Objection to the Specification

The Examiner objected to the specification for having a non-descriptive title. Applicant herein amends the title as suggested by the Examiner (*see* page 2 of the Office Action). In view

of this amendment to the specification, Applicant respectfully requests the Examiner to now withdraw this objection.

III. Objection to the Claim

The Examiner objected to claim 5 because of a minor informality *i.e.*, claim 5 depends on a cancelled claim 4 (*see* page 2 of the Office Action). Applicant has revised the claim, and respectfully submits that the claim as now presented no longer include the potential informality mentioned by the Examiner. Applicant therefore respectfully requests the Examiner to withdraw the objection to the claim.

IV. Prior Art Rejection

Claims 1, 2, 5, 8, 9, 17-19, and 22-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,517,180 to Tullis et al. (hereinafter “Tullis”) in view of U.S. Patent No. 6,527,360 to Otsuki et al. (hereinafter “Otsuki”). Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

Of these rejected claims, only claims 1 and 23 are independent. These independent claims 1 and 23 recite in some variation *inter alia* “wherein: said first sensor is provided further upstream with regard to said carrying direction than said second sensor, said head has a plurality of colored-liquid nozzles that eject a colored liquid and a plurality of colorless-liquid nozzles that eject a colorless liquid, each of said colorless-liquid nozzles forms a colorless block pattern, said plurality of colored-liquid nozzles applies said colored liquid onto a plurality of said colorless block patterns, and a degree of smearing of said colored liquid at a position at which said colorless block pattern is to be formed is detected based on the detection by said second sensor so that a colorless-liquid nozzle that has not ejected said colorless liquid is detected.”

In an exemplary embodiment, when a block pattern is formed by clear ink only, the clear ink is colorless and transparent so that the downstream-side optical sensor 55 cannot detect the presence of this block pattern formed by clear ink. However, by overlaying a pattern formed by colored ink over the block patterns formed by clear ink, the patterns formed by the colored ink becomes darker or lighter, and thus the controller can perform an ejection test of the nozzles ejecting clear ink if this pattern's darkness and lightness can be detected. In other words, in an exemplary embodiment of the present invention, an ejection examination of the colorless liquid is made possible by using smearing of the colored liquid (*e.g.* page 34 of the specification). It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claims mentioned above.

Applicant respectfully submits that the prior art of record (Tullis and Otsuki) do not disclose or even remotely suggest colorless-liquid nozzles that eject colorless liquid. Otsuki is unrelated to colorless ink. Tullis only discloses an optical detector with sensor elements that detect gyrational information or different types of droplet position information. Tullis further discloses stealthy dots which are colored dots formed by a single nozzle that is almost undetectable by a human eye. The stealthy dots are used for detecting positional information (col. 3, line 13 to col. 4, line 6). That is, Tullis also does not disclose or suggest colorless-liquid nozzles ejecting colorless liquid. Furthermore, the prior art of record does not disclose or even remotely suggest a sensor that can detect presence or absence of the pattern formed by the colorless liquid. Even taken for what they would have meant as a whole to an artisan of ordinary skill, the combined teachings of these two references would not have (and could not have) led the artisan of ordinary skill to the subject matter of this arrangement.

Therefore, “each of said colorless-liquid nozzles forms a colorless block pattern, said plurality of colored-liquid nozzles applies said colored liquid onto a plurality of said colorless patterns, and a degree of smearing of said colored liquid at a position at which said colorless pattern is to be formed is detected based on the detection by said second sensor so that a colorless--liquid nozzle that has not ejected said colorless liquid is detected,” as set forth in claims 2 and 23 is not disclosed or suggested by Tullis in view of Otsuki, which lack colorless block pattern and detecting degree of smearing of the colored liquid on the colorless pattern. For at least these exemplary reasons, Applicant respectfully submits that claims 2 and 23 are patentable over the prior art of record. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claims 2 and 23. Claims 1, 5, 8, 9, 17-19, 22, and 24-33 are patentable at least by virtue of their dependency on claim 2 or 23.

V. New Claim

In order to provide more varied protection, Applicant adds claim 34, which is patentable by virtue of its dependency on claim 1 and for additional features set forth therein.

VI. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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